REMARKS

Claims 1-14 are presently pending in the application. Claim 1 was amended to correct a grammatical error. No new matter has been added and support for the amendments to the claims can be found in the specification and drawings. Applicants respectfully submit that this application is now in condition for allowance.

Claim Rejections – 35 U.S.C. §103

Claims 1-6 and 8-13 stand rejected under Section 103 as being unpatentable over Chung et al. U.S. Patent No. 6,597,482 ("Chung") in view of Thompson et al. U.S. Patent No. 6,282,005 ("Thompson"). Applicants respectfully traverse this rejection and submit that the combination of Chung and Thompson fails to teach or suggest the claimed invention.

In accordance with an aspect of the present invention, *multiple RF blocks* are frequency-division multiplexed *onto each wavelength band* of a WDM optical system. As described, for example, in the specification:

> Fig. 3a shows a diagram of the system concept. At central office transmitter 305, the output of a broadband ASE source 306, for example, a gain-flattened Erbium-Doped Fiber Amplifier (EDFA) not shown, is sliced into multiple optical bands whose width matches the FSR of the distribution WGR at a Remote Node (RN) 310 (four bands are shown in the exemplary embodiment). Central office transmitter 305 is coupled to the remote node 310 in the exemplary embodiment via feeder fiber 315. Each spectral band is modulated with multiple blocks of RF subcarriers. In the case of the system demonstration for the present invention, four RF blocks were derived from a commercial satellite antenna. Each RF block of 500 MHz contained greater than 80 digital video channels multiplexed into 16 QPSK carriers in the 950-1450 MHz band. After block-conversion into blocks between 50-550, 550-1050, 1050-1550 and 1550-2050 MHz, *these RF bands were combined externally to modulate each of the four optical bands.* Consequently, the re-multiplexed optical signal in the feeder fiber contained the entire service matrix shown in the inset to Fig. 3a: each square box represents a 500 MHz block of the commercial service.

Specification at pp. 6 – 7, ¶28 (emphasis added).

In this regard, independent claim 1 calls for a system for delivering a plurality of video blocks to a user terminal serviced by a remote node comprising:

> a broadband signal source for providing a broadband signal;
>
> a first WDM having an input port and a plurality of output ports, wherein said broadband signal is forwarded to said input port of said first WDM and further wherein said first WDM separates said broadband signal into a plurality of optical bands output to said output ports of said first WDM;
>
> a plurality of modulators, wherein *each of said plurality of modulators modulate one of said optical bands with a composite signal representing data in a plurality of independent RF blocks to form a plurality of modulated signals*;
>
> a second WDM configured to receive said plurality of modulated signals, wherein said second WDM forms a combined broadcast signal for output on an output port of said second WDM;
>
> a feeder fiber, wherein said remote node receives said combined broadcast signal via said feeder fiber;
>
> a distribution fiber for distributing said combined broadcast signal to a user's site to enable a satellite set-top box at said user's site to select a RF block.

Claim 1 (emphasis added).

The Examiner contends that Chung discloses "a plurality of modulators (i.e., optical modulators 107, Fig. 2), wherein each of the plurality of modulators modulate one of the optical bands with a composite signal representing data in a plurality of independent signal blocks to form a plurality of modulated signals" and cites to Thompson for the teaching of "the composite signal representing data in a plurality of independent RF blocks (see Figs. 1, 2 and 4 of Thompson, col. 10, lines 57-67, col. 11, lines 1-35 and col. 8, lines 30-67). See Office Action at page 4.

As acknowledged by the Examiner, Chung fails to disclose "a plurality of modulators, wherein *each of said plurality of modulators modulate one of said optical bands with a composite signal representing data in a plurality of*

independent RF blocks to form a plurality of modulated signals." Applicants respectfully submit that Thompson fails to remedy the deficiencies in the disclosure of Chung and that the Examiner's citations to FIGS. 1, 2 and 4 of Thompson do not show modulating each optical band *with a composite signal* as claimed. With specific reference to Fig. 5 of Thompson, *a single block* of RF information (e.g., RF INFORMATION 1, RF INFORMATION 2 . . . RF INFORMATION N) is respectively multiplexed onto each of the optical carriers $\lambda_0, \lambda_1, \ldots \lambda_n$. As explicitly stated in Thompson: "[t]he carriers are modulated by information signals 1 – N and transmitted over a single fiber link 146 to an optical receiver group 142." See Col. 11, lines 41 – 44.

By way of contrast, as discussed above and called for in the instant claim, in the present invention *each optical band* is modulated with *a composite signal representing data in a plurality of independent RF blocks to form a plurality of modulated signals*. Thompson fails to teach or even suggest modulating each optical band with a composite signal. Accordingly, Applicants respectfully submit that this rejection is improper and that independent claims 1 and 8 (which contains similar limitations) are patentable over the combination of Chung and Thompson, and that dependent claims 2-7 and 9-14 are patentable for at least the same reasons.

Claims 7 and 14 stand rejected under Section 103 in view of the combination of Chung and Thompson as set forth above, and further in view of Lu et al. U.S. Patent No. 5,880,865 ("Lu"). Applicants hereby reiterate the above argument distinguishing Chung and Thompson from claims 1 and 8, and further submit that Lu fails to remedy the deficiencies in the disclosures of Chung and Thompson.

Lu discloses:

> A Wavelength-Division-Multiplexed (WDM) network provides delivery of both switched services and broadcast analog video over optical facilities through an intermediate optical apparatus (e.g., Passive Optical Network (PON)) splitter to a plurality of remote optical apparatuses (e.g., optical-network units (ONUs)). The broadcast signal is provided to only a selected ONU, together with

the switched service signal for that selected ONU, the selected ONU then distributes the broadcast signal to other ONUs over a separate distribution facility interconnecting the ONUs.

Abstract.

Lu fails to teach or suggest "a plurality of modulators, wherein each of said plurality of modulators modulate one of said optical bands with a composite signal representing data in a plurality of independent RF blocks to form a plurality of modulated signals." Accordingly, it is respectfully submitted that Lu fails to remedy the deficiencies in the disclosures of Chung and Thompson and therefore even if, assuming *arguendo*, these three references would be properly combinable, such combination fails to reach the invention of claims 7 and 14.

The Examiner has objected to the drawings under 37 C.F.R. 1.83(a) as failing to show the features in dependent claims 7 and 14. Applicants attach a proposed drawing correction with changes in red ink to Fig. 3a which depicts the narrowband source (disclosed in claims 7 and 14) connected to the dashed circle which is disclosed in the specification as a coarse WDM at ¶32 on page 9.

In view of the foregoing, Applicants respectfully submit that claims 1-14 are patentable over the cited art and allowance of these claims at an early date is solicited.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. 1.16 or 1.17 to AT&T Corp. Account No. 01-2745. The Examiner is invited to contact the undersigned at (908) 707-1573 to discuss any matter concerning this application.

Respectfully submitted,
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By:

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